Amendments to the Claims

The following is a listing of claims currently pending in this application and their current status. This listing replaces all prior versions and listings.

1. (Currently amended) A composite video signal separation device, comprising

a delay memory [~~for storing~~] configured to store a composite signal[~~,~~] and [~~configured~~] to output [~~multiple~~] a plurality of delayed versions of said composite signal;

a plurality of [~~multiple~~] demodulators [~~,~~] coupled to said delay memory[~~,~~] and configured to demodulate said plurality of [~~multiple~~] delayed versions of said composite signal by a sub-carrier, [~~generating~~] and to generate a plurality of [~~multiple~~] complex baseband signals;

a vertical signal processing block[~~,~~] coupled to said plurality of [~~multiple~~] demodulators[~~,~~] and configured to process said plurality of [~~multiple~~] complex baseband signals[~~, and configured~~] and to output a first separated signal;

a modulator[~~,~~] coupled to said vertical signal processing block[~~,~~] and configured to modulate said first separated signal and to generate [~~, generating~~] a remodulated signal; and

a subtractor [~~subtraction means,~~] coupled to said modulator and configured to subtract said remodulated signal from one of said [~~multiple~~] plurality of delayed versions of said composite signal [~~, generating~~] and to generate a second separated signal.

2. (Currently amended) A composite video signal separation device, comprising

a delay memory for storing a composite signal[~~,~~] and configured to output a plurality of signals derived from [~~multiple delayed versions of~~] said composite signal;

[~~multiple~~] a plurality of demodulators[~~,~~] coupled to said delay memory[~~,~~] and configured to demodulate said plurality of signals derived from [~~multiple delayed versions of~~] said composite signal by a sub-carrier[~~, generating~~] to generate a plurality of [~~multiple~~] complex baseband signals;

a vertical signal processor [~~processing block,~~] coupled to said plurality of [~~multiple demodulators,~~] and configured to process said [~~multiple~~] plurality of complex baseband signals, and further configured to output a first separated signal and a second separated signal;

a modulator[~~,~~] coupled to said vertical signal processor [~~processing block,~~] and configured to modulate said first separated signal[~~, generating~~] and to generate a remodulated signal; and

a subtractor [~~subtraction means,~~] coupled to said modulator and configured to subtract said remodulated signal from one of said plurality of signals derived from [~~multiple delayed versions of~~] said composite signal[~~, generating~~] and to generate a third separated signal.

3. (Currently amended) A composite video signal separation device, comprising

a delay memory for storing a composite signal[~~,~~] and configured to output [~~multiple delayed versions of~~] a plurality of signals derived from said composite signal;

[~~multiple~~] a plurality of demodulators[~~,~~] coupled to said delay memory[~~,~~] and configured to demodulate said [~~multiple delayed versions of~~] plurality of signals derived from said composite signal by a sub-carrier[~~, generating multiple~~] and to generate a plurality of demodulated signals;

[~~multiple~~] a plurality of horizontal signal processing blocks[~~,~~] coupled to said [~~multiple~~] plurality of demodulators[~~,~~] and configured to process said [~~multiple~~] plurality of demodulated signals[~~, generating multiple~~] and to generate a plurality of complex baseband signals;

a vertical signal [~~processing block,~~] processor coupled to said [~~multiple~~] plurality of horizontal signal processing blocks[~~,~~] and configured to process said plurality of [~~multiple~~] complex baseband signals[~~,~~] and [~~configured~~] to output a first separated signal;

a modulator[~~,~~] coupled to said vertical signal processing block[~~,~~] and configured to modulate said first separated signal[~~, generating~~] and to generate a remodulated signal; and

a subtraction device[~~subtraction means,~~] coupled to said modulator and configured to subtract said remodulated signal from one of said [~~multiple delayed versions of~~] plurality signals derived from said composite signal[~~, generating~~] and to generate a second separated signal.

4. (Currently amended) A method for composite video signal separation, comprising [~~the following steps~~]:

obtaining samples of a composite signal;

storing said samples in a delay memory;

demodulating [~~multiple~~] a plurality of samples from said delay memory by a subcarrier to form [~~multiple~~] a plurality of complex baseband signals;

vertically processing said [~~multiple~~] plurality of complex baseband signals to form a first separated signal;

modulating said first separated signal by a subcarrier to form a remodulated signal; and

subtracting said remodulated signal from one of said samples of said composite signal to [~~from~~] form a second separated signal.

5. (Currently amended) A method for composite video signal separation, comprising [~~the following steps~~]:

obtaining samples of a composite signal;

storing said samples in a delay memory;

demodulating [~~multiple~~] a plurality of samples from said delay memory by a subcarrier to form [~~multiple~~] a plurality of complex baseband signals;

vertically processing said [~~multiple~~] plurality of complex baseband signals to form a first separated signal and a second separated signal;

modulating said first separated signal by a subcarrier to form a remodulated signal; and

subtracting said remodulated signal from one of said samples of said composite signal to [~~from~~] form a third separated signal.

6. (Currently amended) A method for composite video signal separation, comprising [~~the following steps~~]:

obtaining samples of a composite signal;

storing said samples in a delay memory;

demodulating [~~multiple~~] a plurality of samples from said delay memory by a subcarrier to form [~~multiple~~] a plurality of demodulated signals;

horizontally processing said [~~multiple~~] plurality of demodulated signals to form [~~multiple~~] a plurality of complex baseband signals;

vertically processing said [~~multiple~~] plurality of complex baseband signals to form a first separated signal;

modulating said first separated signal by a subcarrier to form a remodulated signal; and

subtracting said remodulated signal from one of said samples of said composite signal to [~~from~~] form a second separated signal.

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